

000#88

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

4 (425) 420-9200 (6 (509) 924-9200 FAX 420-9210 )24-9290

(503) 906-9200 (541) 383-9310 FAX 906-9210 FAX 382-7588

# **CHAIN OF CUSTODY REPORT**

# Work Order #: M1 06049

| CLIENT: BRISTOR   |              |            |          |                        | INVO           | ICE TO | ):   |                                     |                 |          |      |      |                   |     | TURN                         | NAROUNE  | REQUEST in Bu            | ısiness Da   | ays*   |
|---|--------------|------------|----------|------------------------|----------------|--------|------|-------------------------------------|-----------------|----------|------|------|-------------------|-----|------------------------------|--|--------------------------|--|--------|
| REPORT TO: ANDE   | KRANAWETT    | ER         |          |                        | 8              | RIS    | STC  | )(_                                 |                 |          |      |      |                   |     | Organic & Inorganic Analyses |  |                          |  |        |
| REPORT TO: ANNE ADDRESS: AMULIT PHONE: 907-770 PROJECT NAME: AMUL | CA ISLAND, F | HLA.       | SKA      |                        |                |        |      |                                     |                 |          |      |      | 10 7 5 4 3 2 1 <1 |     |                              |  |                          |  |        |
| PHONE 907-770   | .0974 EAV. 7 | 70.        | 00-      | 75                     | DO N           | пімре  | R: Z | 100                                 |                 |          | ,    |      |                   |     | STD.                         |  | m Hydrocarbon Analy      |  | 1      |
| PROJECT NAME: AMC   | LITKA        |            | 0 1      |                        | F.O. N         |        |      | and the second second second second | ALYSES          | <u> </u> |      |      |                   |     | ST                           | The same of the sa | 7                        | THE RESIDENCE OF THE PARTY OF T | .      |
| PROJECT NUMBER: 210   | 90           |            | 1 1      |                        |                |        |      | 1                                   |                 |          |      |      |                   |     |                              | ОТНЕ   | Please Speci             | ТУ   |        |
| SAMPLED BY:   |              |            | . {      |                        |                |        |      |                                     |                 |          |      |      |                   |     | *Turnar                      | ound Requests l  | ess than standard may in | ur Rush Cha  | irges. |
| CLIENT SAMPLE   | SAMPLING     | $\preceq$  | A CI     |                        |                |        |      | ,                                   |                 |          |      |      |                   |     | MATRIX                       | # OF   |                          |  | NCA WO |
| IDENTIFICATION  | DATE/TIME    |            | 2        |                        |                |        |      |                                     |                 |          |      |      |                   |     | (W, S, O)                    | CONT.  | COMMENT                  | rs .   | ID     |
| 1.0/AMA1304SL   | 6/16/01 1342 | X          | <i>x</i> | -                      |                | -      |      |                                     | ,               |          |      |      |                   |     | 5                            | 2  |                          |  |        |
| 2.01AMA13055L   | 6/16/01 1345 | X          | X        |                        |                |        |      | ,                                   |                 |          |      |      |                   |     | S                            | 2  |                          |  |        |
| 3.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 4.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 5.  |              | -          |          |                        |                |        |      |                                     |                 | ,        |      |      |                   |     |                              |  |                          |  |        |
| 6.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 7.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              | ××   |                          |  |        |
| 8.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 9.  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 10.   |              | <i>b</i> . |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 11.   |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 12.   |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 13.   |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  |                          |  |        |
| 14.   |              |            |          |                        |                |        |      |                                     |                 |          |      |      | 2                 |     |                              |  |                          |  |        |
| 15.   | 1 / /        |            |          |                        |                |        |      |                                     |                 |          |      | ^    |                   |     |                              |  |                          |  |        |
| RELINQUISHED BY: VANN PRINT NAME: Chalic Marsh                    | rall FIRM: B | RIS        | TOL      | and an interest of the | DATE:<br>TIME: | 6116   | 101  |                                     | VED BY<br>NAME: | Cis      | ug O | Stad | la T              | 200 | lle FIRM:                    | ASA  |                          | DATE (   | 1600   |
| RELINQUISHED BY:  |              |            |          |                        | DATE:          |        | ,    | RECEI                               | VED BY          |          | į.   |      |                   |     |                              |  |                          | DATE:  |        |
| PRINT NAME: ADDITIONAL REMARKS:                                   | FIRM:        |            |          |                        | TIME:          |        |      | PRINT                               | NAME:           |          |      |      |                   |     | FIRM:                        |  |                          | TIME:  |        |
| COC REV 3/99  |              |            |          |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  | TEMP:                    | EDA CE   | 100    |
|   |              |            | 7.       |                        |                |        |      |                                     |                 |          |      |      |                   |     |                              |  | 1611                     | PAGE   | OF (   |



425.420.9200 fax 425.420.9210

**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

6 December, 2001

Anne Kranawetter Bristol Environmental & Engineering 2000 W International Airport C#1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are the results of analyses for samples received by the laboratory on 06/16/01 16:01. If you have any questions concerning this report, please feel free to contact me.

This report was recreated from a previously issued final report in order to provide an electronic copy. The final report used for these electronic copies may have been previously issued as an amended report due to client requested changes to sample names, etc. No data has changed since submission of the previously issued final, or amended, report.

Sincerely,

Stephen Wilson

**Environmental Group Leader** 

1112

Work Orders included in this report:

M106049



Reported:

425.420.9200 fax 425.420.9210

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509.924.9200 fax 509.924.9290

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503.906.9200 fax 503.906.9210 **Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Project Manager: Anne Kranawetter 06/20/01 22:10

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID   | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-------------|---------------|--------|----------------|----------------|
| 01AMA1304SL | M106049-01    | Soil   | 06/16/01 13:42 | 06/16/01 16:01 |
| 01AMA1305SL | M106049-02    | Soil   | 06/16/01 13:45 | 06/16/01 16:01 |

C.O.C.#88

Anchorage, AK 99502-1116

North Creek Analytical - Mobile Lab



Anchorage, AK 99502-1116

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223

Reported:

425.420.9200 fax 425.420.9210

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509.924.9200 fax 509.924.9290

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Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Project Manager: Anne Kranawetter 06/20/01 22:10

# Diesel Hydrocarbons (C10-C25) per AK102 North Creek Analytical - Mobile Lab

| Analyte                       | Result | Reporting<br>Limit | Units     | Dilution | Method       | Prepared   | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|-----------|----------|--------------|------------|---------------|---------|-------|
| 01AMA1304SL (M106049-01) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| <b>Diesel Range Organics</b>  | 243    | 150                | mg/kg dry | 1        | AK 102       | 06/18/01   | 06/19/01      | 0106061 |       |
| Surr: 1-Chlorooctadecane      | 84.9 % | 50-150             |           |          |              |            |               |         |       |
| Surr: Triacontane             | 125 %  | 50-150             |           |          |              |            |               |         |       |
| 01AMA1305SL (M106049-02) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| Diesel Range Organics         | ND     | 150                | mg/kg dry | 1        | AK 102       | 06/18/01   | 06/19/01      | 0106061 |       |
| Surr: 1-Chlorooctadecane      | 90.7 % | 50-150             |           |          |              |            |               |         |       |
| Surr: Triacontane             | 93.3 % | 50-150             |           |          |              |            |               |         |       |

North Creek Analytical - Mobile Lab



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425.420.9200 fax 425.420.9210

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509.924.9200 fax 509.924.9290

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Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter 06/20/01 22:10

### BTEX,MTBE and Naphthalene per EPA Method 8021B North Creek Analytical - Mobile Lab

| Analyte                       | Result | Reporting<br>Limit | Units     | Dilution | Method       | Prepared   | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|-----------|----------|--------------|------------|---------------|---------|-------|
| 01AMA1304SL (M106049-01) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| Benzene                       | ND     | 0.0507             | mg/kg dry | 50       | !1B BTEX/MT  | 1 06/19/01 | 06/20/01      | 0106066 |       |
| Toluene                       | ND     | 0.203              | "         | "        | "            | "          | "             | "       |       |
| Ethylbenzene                  | ND     | 0.203              | "         | "        | "            | "          | "             | "       |       |
| Xylenes (total)               | ND     | 0.405              | "         | "        | "            | "          | "             | "       |       |
| Naphthalene                   | ND     | 2.03               | "         | "        | "            | "          | "             | "       |       |
| Surr: 4-BFB                   | 83.6 % | 50-150             |           |          |              |            |               |         |       |
| 01AMA1305SL (M106049-02) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| Benzene                       | ND     | 0.0495             | mg/kg dry | 50       | !1B BTEX/MT  | 1 06/19/01 | 06/20/01      | 0106066 |       |
| Toluene                       | ND     | 0.198              | "         | "        | "            | "          | "             | "       |       |
| Ethylbenzene                  | ND     | 0.198              | "         | "        | "            | "          | "             | "       |       |
| Xylenes (total)               | ND     | 0.396              | "         | "        | "            | "          | "             | "       |       |
| Naphthalene                   | ND     | 1.98               | "         | "        | "            | "          | "             | "       |       |
| Surr: 4-BFB                   | 82.7 % | 50-150             |           |          |              |            |               |         |       |

North Creek Analytical - Mobile Lab

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

3 of 7



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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 **Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter 06/20/01 22:10

## Physical Parameters per APHA/ASTM/EPA Methods North Creek Analytical - Mobile Lab

| Analyte                       | Result | Reporting<br>Limit | Units     | Dilution | Method       | Prepared   | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|-----------|----------|--------------|------------|---------------|---------|-------|
| 01AMA1304SL (M106049-01) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| % Solids                      | 91.2   | 0.0100 %           | by Weight | t 1      | Gravimetric  | 06/17/01   | 06/18/01      | 0106062 |       |
| 01AMA1305SL (M106049-02) Soil |        |                    |           |          | Sampled: 06/ | 16/01 Rece | eived: 06/16/ | 01      |       |
| % Solids                      | 84.9   | 0.0100 %           | by Weight | i 1      | Gravimetric  | 06/17/01   | 06/18/01      | 0106062 |       |

North Creek Analytical - Mobile Lab



06/20/01 22:10

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

503.906.9200 fax 503.906.9210 541.383.9310 fax 541.382.7588

Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1

Reported: Project Number: 21090

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter

### Diesel Hydrocarbons (C10-C25) per AK102 - Quality Control

#### North Creek Analytical - Mobile Lab

| Analyte Result Limit Units Level Result %REC Limits RPD Limit Notes |         |        | Reporting |       | Spike | Source |      | %REC   |      | RPD   |       |
|---|---------|--------|-----------|-------|-------|--------|------|--------|------|-------|-------|
|   | Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | KI D | Limit | Notes |

| Analyte                    | Result | Limit Units     | Level   | Result      | %REC     | Limits       | RPD  | Limit | Notes |
|----------------------------|--------|-----------------|---------|-------------|----------|--------------|------|-------|-------|
| Batch 0106061 - 3545 ASE   |        |                 |         |             |          |              |      |       |       |
| Blank (0106061-BLK1)       |        |                 | Prepare | ed: 06/18/0 | 1 Analyz | zed: 06/19/0 | )1   |       |       |
| Diesel Range Organics      | ND     | 150 mg/kg wet   |         |             |          |              |      |       |       |
| Surr: 1-Chlorooctadecane   | 19.1   | "               | 23.4    |             | 81.6     | 50-150       |      |       |       |
| Surr: Triacontane          | 17.1   | "               | 23.4    |             | 73.1     | 50-150       |      |       |       |
| LCS (0106061-BS1)          |        |                 | Prepare | ed: 06/18/0 | 1 Analyz | zed: 06/19/0 | )1   |       |       |
| Diesel Range Organics      | 1330   | 150 mg/kg wet   | 1250    |             | 106      | 75-125       |      |       |       |
| Surr: 1-Chlorooctadecane   | 26.6   | "               | 23.4    |             | 114      | 50-150       |      |       |       |
| Surr: Triacontane          | 22.5   | "               | 23.4    |             | 96.2     | 50-150       |      |       |       |
| LCS Dup (0106061-BSD1)     |        |                 | Prepare | ed: 06/18/0 | 1 Analyz | zed: 06/19/0 | 1    |       |       |
| Diesel Range Organics      | 1380   | 150 mg/kg wet   | 1250    |             | 110      | 75-125       | 3.69 | 20    |       |
| Surr: 1-Chlorooctadecane   | 21.6   | "               | 23.4    |             | 92.3     | 50-150       |      |       |       |
| Surr: Triacontane          | 21.4   | "               | 23.4    |             | 91.5     | 50-150       |      |       |       |
| Matrix Spike (0106061-MS1) | Sour   | rce: M106048-01 | Prepare | ed: 06/18/0 | 1 Analyz | zed: 06/19/0 | 1    |       |       |
| Diesel Range Organics      | 1730   | 150 mg/kg dry   | 1600    | ND          | 108      | 60-140       |      |       |       |
| Surr: 1-Chlorooctadecane   | 27.7   | "               | 30.0    |             | 92.3     | 50-150       |      |       |       |
| Surr: Triacontane          | 26.5   | "               | 30.0    |             | 88.3     | 50-150       |      |       |       |
|                            |        |                 |         |             |          |              |      |       |       |

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509.924.9200 fax 509.924.9290

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Bristol Environmental & Engineering 2000 W International Airport C#1

Project: Amchitka
Project Number: 21090

Reported:

Anchorage, AK 99502-1116

Project Manager: Anne Kranawetter

06/20/01 22:10

#### BTEX,MTBE and Naphthalene per EPA Method 8021B - Quality Control

### North Creek Analytical - Mobile Lab

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch 0106066 - MeOH Extraction | on   |                |              |                 |        |  |
|---------------------------------|------|----------------|--------------|-----------------|--------|--|
| Blank (0106066-BLK1)            |      |                | Prepared & A | Analyzed: 06/19 | 9/01   |  |
| Benzene                         | ND   | 0.0250 mg/kg v | vet          |                 |        |  |
| Toluene                         | ND   | 0.100 "        |              |                 |        |  |
| Ethylbenzene                    | ND   | 0.100 "        |              |                 |        |  |
| Xylenes (total)                 | ND   | 0.200 "        |              |                 |        |  |
| Naphthalene                     | ND   | 1.00 "         |              |                 |        |  |
| Surr: 4-BFB                     | 2.23 | "              | 2.50         | 89.2            | 50-150 |  |
| LCS (0106066-BS1)               |      |                | Prepared & A | Analyzed: 06/1  | 9/01   |  |
| Benzene                         | 1.95 | 0.0250 mg/kg v | vet 2.50     | 78.0            | 69-138 |  |
| Toluene                         | 1.99 | 0.100 "        | 2.50         | 79.6            | 53-151 |  |
| Ethylbenzene                    | 2.22 | 0.100 "        | 2.50         | 88.8            | 61-141 |  |
| Xylenes (total)                 | 6.26 | 0.200 "        | 7.50         | 83.5            | 62-141 |  |
| Naphthalene                     | 2.82 | 1.00 "         | 2.50         | 113             | 65-135 |  |
| Surr: 4-BFB                     | 2.32 | "              | 2.50         | 92.8            | 50-150 |  |

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Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter 06/20/01 22:10

#### **Notes and Definitions**

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.

wet Sample results reported on a wet weight basis (as received)

RPD Relative Percent Difference

North Creek Analytical - Mobile Lab

### **Items for Project Manager Review**

| LabNumber | Analysis | Analyte | Exception                                     |
|-----------|----------|---------|---|
|           |          |         | Report recreated from:                        |
|           |          |         | \\sisters\elmnt\Report\M106049 FINAL 06 20 01 |
|           |          |         | 2210.mdb                                      |
|           |          |         | Default Report (not modified)                 |